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- No letter should be more than 400 words.
- For letters on scientific subjects we normally reserve our correspondence columns for those relating to issues discussed recently (within six weeks) in the *BMJ*.
- We do not routinely acknowledge letters. Please send a stamped addressed envelope if you would like an acknowledgment.
- Because we receive many more letters than we can publish we may shorten those we do print, particularly when we receive several on the same subject.

## Appointing a colleague

SIR,—In talking about “who appoints the appointments committee” Dr M C Petch admits that this is largely mysterious and that powerful undemocratic forces are often at work.<sup>1</sup> Surely there should be a more open and accountable system for appointing these representatives on appointment committees. Often a trainee from the same centre as the Royal College of Surgeons assessor arrives on the shortlist. Some regions have the same college assessor for consecutive jobs and some regions have college assessors coming from the same hospital unit time after time.

My own feeling is that the local representatives, the regional university representative, and the other regional faculty representatives should all have a vote but that college assessors coming in from outside should retain only the power of veto. Certainly there is no need for them to be concerned in awarding points for drawing up the initial shortlist even if they take part in a more positive way at the interview itself.

Secondly, Dr Petch mentions the benefits of having a word with an outpatient sister or a medical secretary because “there seems to be no good reason why the performance of senior registrars should be judged solely by their seniors.” I may say that recently while applying for jobs when three or more referees’ names were requested I decided to use the theatre sister as one of the referees. There were three other consultant referees and plenty of consultants’ names throughout the curriculum vitae with whom telephone calls could have been made. The use of this particular referee caused a storm of protest by senior colleagues and it was said that I would never be shortlisted while using that particular reference. In the event that prediction did not prove to be true, but I was, nevertheless, astounded by the violence of the reaction. I still maintain that for a surgeon a theatre sister is an excellent person to use as a reference because it is more important how well surgeons get on in theatre and how they work with their team than it is how well they get on with colleagues whom they rarely meet during the week.

I shall not forget these present experiences and shall hope to do something to influence a change should this debate started by Dr Petch proceed further and gather momentum.

SENIOR REGISTRAR

1 Petch MC. How to appoint a colleague. *Br Med J* 1989;298:1365-7. (20 May.)

SIR,—I share Dr M C Petch’s reservations about the appointing of interview committees.<sup>1</sup>

I regard it as a self evident principle that a candidate should be appointed only if all other potential candidates of similar training to the

successful applicant could have been aware that the post was one for which they could legitimately apply.

I became aware after the event of one consultant appointment in which no doctors with similar training to the successful local candidate could have realised from the advertisement that they could legitimately apply, and at the time I wrote various letters protesting about the conduct of the appointment committee.

I wrote to the chairperson of the relevant health authority, who did not accept the above principle as self evident. I wrote to the Royal College of Physicians. The registrar replied that “this was one of those cases where the health authority did not get the regional adviser’s approval for the advertisement.” He stated that he had “some sympathies with my point of view but do not think there is anything more we can do in the present situation.” There is certainly scope for improving the conduct of some appointment committees.

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1 Petch MC. How to appoint a colleague. *Br Med J* 1989;298:1365-7. (20 May.)

## Near death experience and the NMDA receptor

SIR,—In his editorial Dr Louis Appleby notes that the available evidence on near death experiences indicates a physiological substrate.<sup>1</sup> A series of recent discoveries in neuropharmacology suggest a specific, physiological explanation for some near death experiences, implicating certain neurotransmitter receptors in the brain.

It has been noted that the dissociative anaesthetic ketamine can reproduce all aspects of the near death experience, including a sense of ineffability, timelessness, that what is experienced is “real,” that one is actually dead, a perception of separation from the body, vivid hallucination, rapid movement through a tunnel, and emerging “into the light.”<sup>2</sup> This observation has recently acquired an enhanced importance with the discovery that ketamine, like its congener phencyclidine (PCP, “angel dust”), can bind to a site on the *N*-methyl-D-aspartate (NMDA) receptor.<sup>3</sup> The substances which bind to this site (known as the phencyclidine site) are powerful dissociative hallucinogens. The NMDA receptor also has binding sites for glycine and L-glutamate.<sup>4</sup> L-Glutamate, an excitatory amino acid, is a major neurotransmitter in the cerebral cortex. Much of the interest in NMDA receptors arises from the finding that excess glutamate will kill the neuron (excitotoxicity) and that this process is implicated in ischaemic,

hypoxic, hypoglycaemic, and epileptic brain damage.<sup>5</sup> NMDA receptors also play an important part in learning and memory and possibly psychosis.<sup>6</sup>

Blockade of the NMDA receptor by ketamine and its congeners can prevent excitotoxicity.<sup>6</sup> The evidence suggests that an endogenous blocking agent would also protect neurons from excitotoxic damage. At least one endogenous agent has been discovered,  $\alpha$  endopsychosin, which will bind to the phencyclidine site on the NMDA receptor.<sup>7</sup> It is possible that a massive release of an NMDA receptor blocker, such as  $\alpha$  endopsychosin, might function to reduce excitotoxicity in the ischaemic brain—for example, during cardiac arrest—with a short lived, dissociative hallucinogenic state occurring as a side effect. Carr has suggested that a flood release of endorphins might explain the near death experience.<sup>8</sup> The endorphins, however, are not potent hallucinogens and do not reproduce a state resembling the near death experience. While they may play a part in the near death experience, substances active at the phencyclidine binding site are better candidates to explain the mental state during near death experience.

The NMDA receptor is also concerned in memory formation.<sup>9</sup> It has been suggested that memories are normally suppressed by a “gate” which is open to data from the outside. Reduced external input while awareness remains (as occurs with ketamine) may lead to a release and dynamic organisation of memories.<sup>2</sup> The NMDA receptor may be the equivalent of a gate and its closure to external input via receptor blockade may lead to the emergence of old memories.

While, as Dr Appleby notes, the near death experience illustrates more about psychological life than about death it may also provide clues to certain aspects of physiological life.

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